

81927-53

3/12/2014

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**U.S. ENVIRONMENTAL PROTECTION  
AGENCY**

Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

EPA Reg.  
Number:

81927-53

Date of Issuance:

MAR 12 2014

Term of Issuance:

Conditional

Name of Pesticide Product:

Alligare 9% Copper

**NOTICE OF PESTICIDE:**

☒ Registration  
☐ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Alligare, LLC  
13 N. 8<sup>th</sup> Street  
Opelika, AL 36801

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product (OPP Decision Number: D-484029) is conditionally registered in accordance with FIFRA sec 3(c)(7)(a) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 81927-53".

Signature of Approving Official:

Jacqueline Hardy, Product Manager Team 34  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

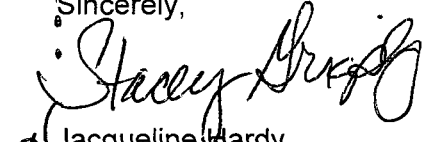
Date:

MAR 12 2014

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped label with comments is enclosed for your records. Submit one (1) copy of your final printed labeling prior to release of this product for shipment. Should you have any questions concerning this letter, please contact me by telephone at (703) 308-6416 during the hours of 8:00 am to 4:00 pm EST.

Sincerely,

  
Jacqueline Hardy  
Product Manager 34  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

Enclosures: (Stamped Label)

# ALLIGARE 9% COPPER

## ALGAECIDE and HERBICIDE

**For Use In:** Lakes; Potable Water Reservoirs; Farm, Fire, Fish, Fish Hatcheries and Raceways; Crop and Non-Crop Irrigation Conveyance Systems (Ditches, Canals and Laterals)

**ACTIVE INGREDIENT:**

Copper Ethanolamine Complex, Mixed  
(Mono CAS# 14215-52-2 and Tri CAS# 82027-59-6)\* ..... 27.9%

**OTHER INGREDIENTS:** ..... 72.1%

**TOTAL:** ..... 100.0%

\*Metallic copper equivalent, 9%. Contains 0.90 lb. of elemental copper per gallon.

## KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
IF INHALED	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.	
<b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.	

[Optional Text: See inside label booklet for additional Precautionary Statements and Directions for Use including Storage and Disposal instructions.]

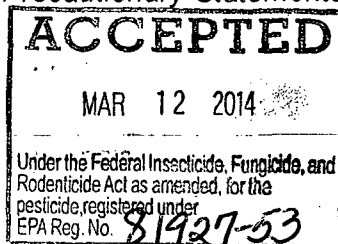
OR

See inside label booklet for First Aid, Precautionary Statements and Direction for Use including Storage and Disposal instructions.]

**Manufactured for:**

Alligare, LLC  
13-N. 8<sup>th</sup> Street  
Opelika, AL 36801

EPA Reg. No. 81927-XX



EPA Est. No.

Net Contents:

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER**

**CORROSIVE.** Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Mixers, loaders, applicators, and other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant footwear plus socks,
- Goggles or face shield,
- Chemical-resistant gloves made of any waterproof mater, and a chemical-resistant apron when mixing, loading or cleaning equipment.

**USER SAFETY REQUIREMENTS**

Users must follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the products' concentrate. Do not reuse them.

**USER SAFETY RECOMMENDATIONS**

Users must wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash outside of gloves before removing.

Potable water sources treated with Alligare 9% Copper may be used as drinking water only after proper additional potable water treatments.

**ENVIRONMENTAL HAZARDS:**

**For Aquatic Use:**

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than 1/2 of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if permit is required.

Certain water conditions including low pH (<6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

**For Terrestrial Use:**

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

**PRODUCT INFORMATION**

Alligare 9% Copper is a liquid copper-based formulation containing ethanolamine chelating agents to prevent the precipitation of copper with carbonates and bicarbonates in the water. Alligare 9% Copper effectively controls a broad range of algae including: **Planktonic** (suspended) forms such as the

Cyanobacteria (*Microcystis*, *Anabaena* & *Aphanizomenon*), Green algae (*Raphidocelis* & *Cosmarium*) Golden algae (*Prymnesium parvum*) and diatoms (*Navicula* & *Fragilaria*); **Filamentous** (mat-forming) forms such as the Green Algae (*Spirogyra*, *Cladophora*, *Ulothrix* & *Rhizoclonium*) and **Benthic** (bottom-growing) forms such as *Chara* and *Nitella*. Alligare 9% Copper has also been proven effective in controlling the rooted aquatic plant, **Hydrilla verticillata**. Waters treated with Alligare 9% Copper may be used for swimming, fishing, further potable water treatment, livestock watering or irrigating turf, ornamental plants or crops after treatment.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label and use strictly in accordance with precautionary statements and directions.

**For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters.**

Do not apply this product in a way that will contact workers or persons, either directly or through drift. Only protected handlers may be in the area during application. For requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Do not enter or allow others to enter until application of product has been completed.

## PRE-TREATMENT CONSIDERATIONS:

In **Potable Water Reservoirs, Lakes, Industrial Ponds & Wastewater** or other monitored water systems, initial treatment with Alligare 9% Copper should be considered at the onset of nuisance bloom conditions as evidenced by initial taste and odor complaints; high cell counts or chlorophyll a concentrations; high MIB or geosmin concentrations; visible surface scum formations; low Secchi disk readings; significant daily fluctuations in dissolved oxygen; and/or sudden increases in pH. Monitoring of several of these parameters on a regular basis will assist in optimizing the timing of treatments and reducing the amounts of Alligare 9% Copper needed for seasonal control. Identification of primary nuisance species or genera may also be helpful in determining and refining dosage rates.

In Ponds (Farm, Fire, Fish, Ornamental, Swimming), Small Lakes, Fish Hatcheries, Aquaculture Facilities, treatment with Alligare 9% Copper should be started when visible, actively growing algae and susceptible plants appear in the spring, preferably before significant surface accumulations occur. Aeration and/or fountain system, where available, should be in operation at the time of treatment.

## SURFACE SPRAY/INJECTION

### SLOW-FLOWING OR QUIESCENT WATER BODIES ALGAECIDE APPLICATION

For effective control, proper chemical concentration should be maintained for a minimum of three hours contact time. The application rates in the chart are based on static or minimal flow situations. Where significant dilution or loss of water from unregulated inflows or outflows occur (raceways) within a three hour period, chemical may have to be metered in.

1. Identify the form of algae growth present as one of the following types: Planktonic (suspended), Filamentous (mat forming), or Benthic (*Chara*/*Nitella*) and estimate the density of growth (Low, Medium, High). Use **Table 1 – Copper Concentration** to select the desired **PPM** (Parts per Million) **Copper** needed, based upon the algal form and density.

Table 1 – Copper Concentration				
Form of Algal Growth	Density of Growth	Density of Growth		
		Low	Medium	High
Planktonic		0.2	0.4	0.6
Filamentous		0.2	0.6	0.8
Benthic		0.4	0.7	1.0

2. Refer to the **Table 2 – Alligare 9% Copper Application Rate** and determine gallons of product needed per Acre-foot corresponding to the desired PPM concentration determined in step #1.

<b>Table 2 – Alligare 9% Copper Application Rate (Gallons)</b>									
<b>PPM Copper</b>	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
<b>Gallon per Acre-ft</b>	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0

3. Determine acre-feet within the intended treatment area (area of infestation) by measuring length, width plus averaging several depth readings within the treatment area. Use the formula:

$$\text{Length (ft.)} \times \text{Width (ft.)} \times \text{Avg. Depth (ft.)} = \text{Acre-Feet}$$

43,560

4. Multiply Acre-Feet calculated in Step #3 times the gallons of Alligare 9% Copper determined in Step #2 to determine number of gallons of Alligare 9% Copper required for the intended treatment area.
5. Before applying, dilute the required amount of Alligare 9% Copper with enough water to ensure even distribution with the type of equipment being used. Typical dilution range is 9:1 when using backpack-type sprayer or up to 50:1 when using water pump equipment or large tank sprayers.
6. Break up floating algae mats manually before spraying or with force of power sprayer if one is used. Use hand or power sprayer adjusted to rain-sized droplets to cover area evenly taking water depth into consideration. If using underwater injection systems such as drop hoses or booms with weighted drop hoses, ensure boat pattern is uniform throughout treatment area. Spray shoreline areas first to avoid trapping fish.
7. Clean spray equipment by flushing with clean water after treatment and follow **STORAGE AND DISPOSAL** instructions on the label for empty or remaining partial containers.
8. Under conditions of heavy infestation, treat only 1/3 to 1/2 of the water body at a time to avoid fish suffocation caused by oxygen depletion from decaying algae. (See additional Environmental Hazards).

#### **SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

#### **Droplet Size**

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

#### **Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

#### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

#### **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

#### **Equipment**

All ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

**For groundboom application:**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

**OTHER TREATMENT FACTORS AND CONSIDERATIONS**

- Calm and sunny conditions when water temperature is at least 60°F will usually expedite control results.
- Effective control of algae requires direct contact with all cells throughout the water column, since these plants do not have vascular systems to transport copper from cell to cell.
- Visible reduction in algae growth should be observed in 24 to 48 hours following application with full infestation and water temperatures.
- Re-treat areas if re-growth or new growth begins to appear and seasonal control is desired. Identify new growth to re-check required copper concentration that may be needed for control.
- Apply treatment along the shore and proceed outwards in bands to allow fish move into untreated areas.
- No more than 1/2 of the water body may be treated at one time. (Refer to Environmental Hazards for additional guidance).
- The minimum retreatment interval between consecutive treatments is 14 days.

Alligare 9% Copper may be used as an alternative in low volume flow situations, spot treatments or treatment of bottom-growing algae in deep water.

**Permits:**

Some states may require permits for the application of this product to public waters. Check with your local authorities.

**HERBICIDE APPLICATION (For Hydrilla Control)**

Control of *Hydrilla verticillata* can be obtained from copper concentrations of 0.4 to 1.0 ppm resulting from Alligare 9% Copper treatment. Choose the application rate based upon stage and density of Hydrilla growth and respective water depth from the chart below.

**Application Rates  
Gallons/Surface Acre\***

Growth/Stage Relative Density	PPM Copper	DEPTH IN FEET					
		1	2	3	4	5	6
Early Season Low Density	0.4	1.2	2.4	3.6	4.8	6.0	7.2
	0.5	1.5	3.0	4.5	6.0	7.5	9.0
Mid-Season Moderate Density	--0.6--	--1.8--	--3.6--	--5.4--	--7.2--	--9.0--	--10.8--
	0.7	2.1	4.2	6.3	8.4	10.5	12.6
Late Season High Density	--0.8--	--2.4--	--4.8--	--7.3--	--9.6--	--12.0--	--14.4--
	0.9	2.7	5.4	8.1	10.8	13.5	16.2
	1.0	3.0	6.0	9.0	12.0	15.0	18.0

\*Application rates for depths greater than six feet may be obtained by adding the rates given for the appropriate combination of depths. Application rates should not result in excess of 1.0 ppm copper concentration within treated water.

**ALLIGARE 9% COPPER: HARVESTER™ TANK MIX**

On waters where enforcement of use restrictions for domestic uses are acceptable, the following mixture can be used as an alternative Hydrilla control method.

Tank mix 3 gallons of Alligare 9% Copper with 2 gallons of HARVESTER™. Apply mixture at the rate of 5 gallons per surface acre. Dilute with at least 9 parts water and apply as a surface spray or underwater injection. Observe all cautions and restrictions on the labels of both products used in this mixture.

**FLOWING WATER**

**DRIP SYSTEM APPLICATION - FOR USE IN POTABLE WATER AND IRRIGATION CONVEYANCE SYSTEMS**

**PRE-TREATMENT CONSIDERATIONS**

In Crop and Non-Crop Irrigation Conveyance Systems: Ditches, Canals & Laterals, Alligare 9% Copper treatments should be applied as soon as algae or aquatic vascular plants begin to interfere noticeably with normal delivery of water (clogging of lateral headgates, suction screens, weed screens

and siphon tubes). Delaying treatment could perpetuate the problem causing massing and compacting of plants. Heavy infestations and low flow conditions may require increasing water flow rate during application.

Accurately determine water flow rates. In the absence of weirs, orifices, or similar devices which give accurate water flow measurements, volume of flow may be estimated by the following formula:

$$\text{Average Width (feet)} \times \text{Average Depth (feet)} \times \text{Velocity* (feet/second)} \times 0.9 = \text{Cubic Feet per Second (C.F.S.)}$$

\*Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (feet) by the time (seconds) will yield velocity (feet/second). This measurement should be repeated at least three times at the intended application site and then averaged.

- After accurately determining the water flow rate in C.F.S. or gallons/minute, find the corresponding Alligare 9% Copper drip rate on the chart below.

WATER FLOW RATE		ALLIGARE 9% COPPER DRIP RATE*		
C.F.S	Gal/Min	Qts./Hr.	MI/Min.	Fl. Oz./Min.
1	450	1	16	0.5
2	900	2	32	1.1
3	1350	3	47	1.6
4	1800	4	63	2.1
5	2250	5	79	2.7

- Calculate the amount of Alligare 9% Copper needed to maintain the drip rate for a period of 3 hours by multiplying Qts./Hr. x 3; ml/Min. x 180; or Fl. Oz./Min x 180. Dosage will maintain 1.0 ppm copper concentration in the treated water for the 3 hour period. Introduction of the chemical should be made in the channel at weirs or other turbulence-creating structures to promote the dispersion of chemical.
- Pour the required amount of Alligare 9% Copper into a drum or tank equipped with a brass needle valve and constructed to maintain a constant drip rate. Use a stop watch and appropriate measuring container to set the desired drip rate. Readjust accordingly if flow rate changes during the 3 hour treatment period.
- Distance of control obtained down the waterway will vary depending upon density of vegetation growth. Treatment period may have to be extended up to 6 hours in areas where control may be difficult due to high flows or significant growth. Periodic maintenance treatments may be required to maintain seasonal control.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Keep container closed when not in use. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not reuse or refill container. Do not contaminate feed, feedstuffs, or drinking water. Do not store or transport near food or feed.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

**CONTAINER HANDLING: Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to

drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of container in a sanitary landfill, or by incineration.

**Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of container in a sanitary landfill, or by incineration.

### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. To the extent consistent with applicable law, no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

[EPA approval date]

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